



ELSEVIER

Contents lists available at ScienceDirect

## Health Policy

journal homepage: [www.elsevier.com/locate/healthpol](http://www.elsevier.com/locate/healthpol)

# Considering long-term care insurance for middle-income countries: comparing South Korea with Japan and Germany



Jong Chul Rhee<sup>a,b</sup>, Nicolae Done<sup>c,\*</sup>, Gerard F. Anderson<sup>d</sup>

<sup>a</sup> Chairman, Healthcare Review and Assessment Committee, Health Insurance Review and Assessment Service, Seoul, Korea

<sup>b</sup> Department of Health Policy and Management, Johns Hopkins Bloomberg School of Public Health, 225N Collington Avenue, Baltimore, MD, 21231, USA

<sup>c</sup> PhD Student in Health Economics and Policy, Department of Health Policy and Management Johns Hopkins Bloomberg School of Public Health, Baltimore, USA

<sup>d</sup> Professor, Department of Health Policy and Management, Johns Hopkins Bloomberg School of Public Health, Baltimore, USA

## ARTICLE INFO

### Article history:

Received 4 March 2015

Received in revised form 19 May 2015

Accepted 3 June 2015

### Keywords:

Long-term care insurance

Financing

South Korea

Japan

Germany

## ABSTRACT

Financing and provision of long-term care is an increasingly important concern for many middle-income countries experiencing rapid population aging. We examine three countries (South Korea, Japan, and Germany) that use social insurance to finance medical care and have developed long-term care insurance (LTCI) systems. These countries have adopted different approaches to LTCI design within the social insurance framework. We contrast their financing systems and draw lessons regarding revenue generation, benefits design, and eligibility. Based on this review, it seems important for middle-income countries to start developing LTCI schemes early, before aging becomes a significant problem and substantial revenues are needed. Early financing also ensures that the service delivery system has time to adapt because most middle-income countries lack the infrastructure for providing long-term care services. One approach is to start with a limited benefit package and strict eligibility rules and expanded the program as the country develops sufficient experience and more providers became available. All three countries use some form of cost-sharing to discourage service overuse, combined with subsidies for poor populations to maintain appropriate access. A major policy choice is between cash benefits or direct provision of services and the approach will have a large impact on the workforce participation of women.

© 2015 The Authors. Published by Elsevier Ireland Ltd. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

## 1. Introduction

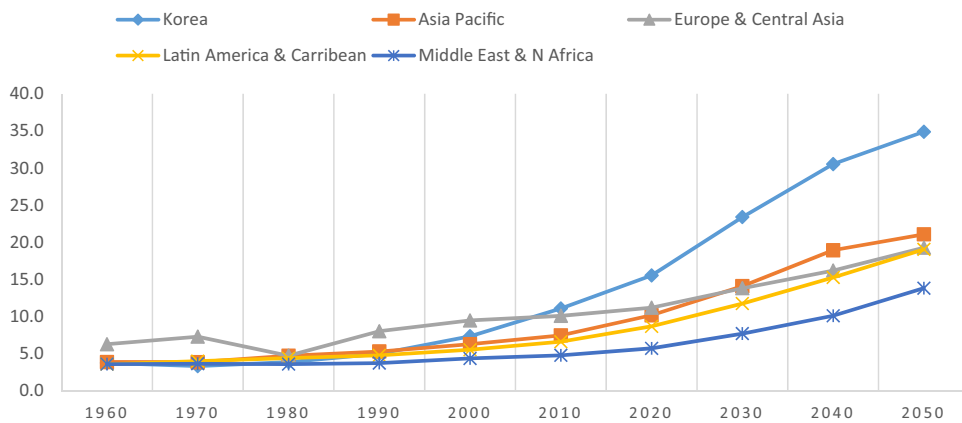
Because of declining fertility rates and increasing life expectancy, many middle-income countries are now beginning to focus on how to finance and develop long-term care programs. For most middle-income countries, this is a relatively new issue necessitated primarily by the changing demographics and an increasing willingness in

some cultures to allow elders to be cared for outside of the home. The provision of paid long-term care services raises many issues, including: the responsibility of families to provide services to older persons, the provision of institutional versus home care, the appropriate level of training for care providers, and many other cultural, financial and delivery system issues.

In this paper, we focus primarily on one issue – options for designing a financing system for long-term care in middle-income countries. We examine the choices in three high-income countries that use social health insurance to finance medical care to guide this discussion. In this article,

\* Corresponding author. Tel.: +1 617 755 9123.

E-mail addresses: [ndone1@jhu.edu](mailto:ndone1@jhu.edu), [nicu.done@gmail.com](mailto:nicu.done@gmail.com) (N. Done).



**Fig. 1.** Population aged 65 years and above as a percentage of the total population, in Korea and developing countries in different world regions, 1960–2050. Source: [3].

we focus on South Korea as an example of a rapidly aging country that is currently experiencing the demographic transition that many middle-income countries will soon experience and has recently decided to provide publicly financed long-term care insurance. We contrast the financing approach taken by South Korea with the approaches taken by Germany and Japan. The objective of this comparative policy analysis is to suggest alternative approaches to finance long term care services in middle-income countries. We focus on countries that use social insurance to finance their medical care systems because many middle-income countries use social insurance to finance their medical care systems and so will be familiar with this financing approach [1].

#### International trends

Fig. 1 shows the aging trends in several World Bank regions of the world. Most high-income countries already have an aging population and most have already developed or are developing long-term care systems. Most middle-income countries have some additional lead-time before the demographic transition makes long-term care a pressing economic and social problem. By 2050, approximately 20 percent of the population will be 65 or older in the Asian Pacific, Latin America, Europe, and Central Asian regions. The Middle East and North Africa regions will approach 15 percent elderly population by mid-century.

#### 1.1. Demographic trends in South Korea

South Korea is an example of a country already in the middle of the demographic transition. The population of South Korea nearly doubled in the second half of the 20th

century, from about 25.0 million in 1960 to over 47.0 million in 2000 (Table 1). The birth rate then slowed dramatically while at the same time life expectancy increased rapidly. Between 2000 and 2010, the overall population growth rate was only 0.5 percent per year; the population is projected to peak in 2030 at 53.7 million and to decrease thereafter. This trend is the result of sharply decreasing total fertility rate, which in 2010 was the lowest among OECD countries at 1.2 births per woman, as well as the increasing life expectancy, which went from 52.4 years in 1960 to 81.1 years in 2011 and is projected to grow to 86.0 years by 2040 [2].

These trends have caused a fundamental change in the population pyramid in Korea (Fig. 2). Between 1960 and 1990, the proportion of people aged 65 and over increased relatively slowly, from 3.7 percent to 5.0 percent. It is now increasing much more rapidly – having reached 11.1 percent in 2010. This trend is projected to accelerate, with the latest population projections estimating a proportion of 15.7 percent in 2020, 24.3 percent in 2030, and 34.3 percent in 2050. Perhaps more important for long-term care services is that the population aged 80 years and over is estimated to increase from 2.0 percent in 2010 to about 15.0 percent in 2050 [3].

## 2. Creating long-term care insurance (LCTI) in South Korea

Deciding on the appropriate LCTI approach can take years involving many interrelated decisions. The discussion of creating a LCTI system in South Korea began in 2000, when a task force was created under the Ministry

**Table 1**  
Demographic indicators in S. Korea, 1960–2010.

	1960	1970	1980	1990	2000	2010	2020	2030	2040	2050
Population, total (millions)	25.01	32.2	38.1	42.9	47.0	49.4	51.4	52.2	51.1	48.1
Population growth rate, annual (%)	2.91	2.18	1.56	0.99	0.84	0.46	0.3	0.0	−0.4	−1.0
Population aged 65 and over (% of total)	3.7	3.3	3.9	5.0	7.3	11.1	15.5	23.4	32.3	37.4
Fertility rate (births per woman)	6.16	4.53	2.82	1.57	1.47	1.23	1.4	1.5	1.6	1.7
Life expectancy at birth, females (years)	55.5	65.6	70.0	75.5	79.6	84.1	86.5	88.6	90.5	92.2
Life expectancy at birth, males (years)	50.6	58.7	61.8	67.3	72.3	77.2	79.8	81.9	83.4	85.5

Source: [3].

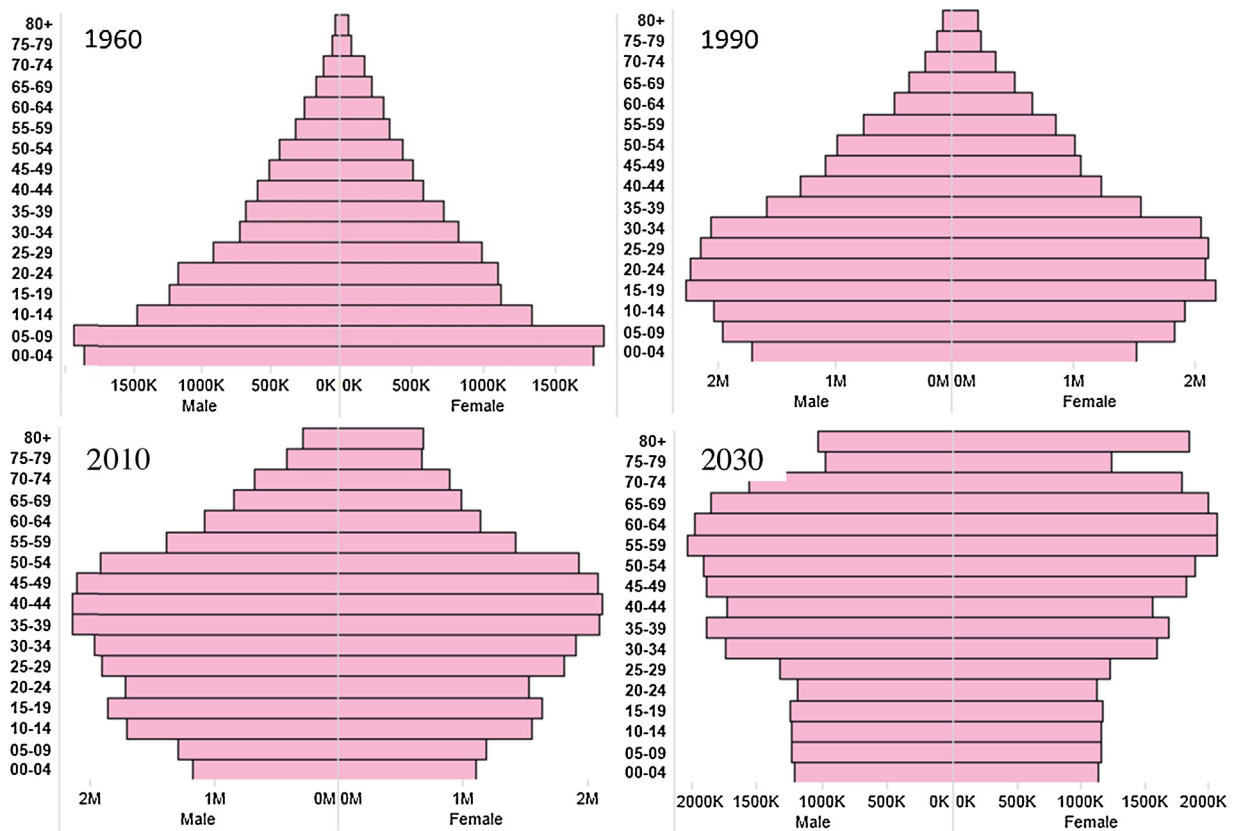


Fig. 2. Population pyramids for South Korea – 1960, 1990, 2010, and 2030. Source: [3].

of Health and Welfare. The initial idea was to create a system separate from the social health insurance scheme because at the time the social insurance system was facing a significant budget deficit and was not considered a good platform for LTCI [4]. Specific options were discussed in 2003 and 2004, and three pilot projects were carried out [5]. The LTCI system in Korea was implemented in July 2008 using a social insurance framework as the financing for medical care using social insurance as it became more viable in the intervening years and therefore less politically problematic.

Implementation of the long-term care insurance system became an important political issue in Korea as the percentage of the elderly population grew rapidly. The elderly were a high-turnout political constituency with a concern about long-term care services. As a result, the Korean leadership had a strong political incentive to enact a LTCI scheme [6]. On a social level, the families of the aged also strongly supported a program that would provide relief from the care giving burden and ensure higher inheritances from aged parents [6]. The increase in women's labor force participation and the concurrent erosion in the culture of filial piety whereby children (usually, the eldest daughter-in-law) had responsibility for their elderly parents led to increasingly common conflicts within families [4]. The introduction of the insurance program is also thought to have signaled a policy shift from a deep focus on economic growth to

increased attention towards the welfare of the population [7].

A challenge was that the country's long-term care infrastructure at the time was inadequate, with an insufficient supply of long-term care hospitals and residential facilities, as well as a shortage of trained professionals. Moreover, in contrast to many other developed countries, South Korea (and to a certain extent, Japan) did not already have an extensive system of religious and non-profit organizations available to meet the need for long term care services [5]. Political leaders therefore agreed that the financing scheme would help stimulate the development of infrastructure in anticipation of the sharply increasing number of elderly that are likely to use long term care services [6].

There was a consensus that the LTCI program could not be implemented without adequate provider supply, so the Government employed two main approaches to accelerate supply growth. First, starting in 2005, funds were allocated to build new home-care, community-based and institutional facilities in remote areas, and to renovate existing facilities [8]. Due to concerns that this approach would constitute a major budgetary burden, the Government strongly promoted private sector participation: it allowed the entry of for-profit providers on equal footing with non-profits, eliminated or relaxed legal requirements for providers, and held briefing sessions to explain procedures

**Table 2**  
Number of LTC providers in Korea, 2006–2009.

Year	Institutional facilities	In-home providers
2006	815	1045
2008 (June) <sup>a</sup>	1271	3630
2009 (May)	2016	12,935

Source: Korean Development Institute 2010.

<sup>a</sup> Start of the LTCI implementation.

for establishing new LTC service organizations [8]. As a result of this approach, the number of institutional facilities and in-home service provider organizations grew dramatically between 2006 and 2009 (Table 2).

Post-implementation public opinion was quite positive, with 74.9 percent of Korean elderly and their caregivers reporting satisfaction with the new system in 2009. This proportion increased to 86.9 percent in 2011, suggesting widening acceptance of the program [9]. Caregivers are even more pleased with the system, with 88.5 percent reporting being satisfied, 92.7 percent reporting that it increases opportunity and time for social activities and 92.0 percent that it decreases the care giving burden [10]. Among beneficiaries, 78.3 percent reported that their health status had improved as a result of the new system, while 75.5 percent said that it had improved the care environment [10].

### 2.1. LTC financing in South Korea

Two types of financing were considered in the debate prior to the introduction of the LTCI scheme: tax-based system and social insurance. The social insurance approach was preferred in part because of the reluctance of the government to increase the tax rates and because of Korea's familiarity with a social insurance system for financing medical care [6]. Politically, the Ministry of Health and Welfare (MOHW) also favored the idea of a system under its firm control.

One important concern at the time was whether there would be enough people voluntarily choosing to purchase LTCI in order to create an adequate pool of enrollees. The experience with the introduction of a voluntary national pension scheme to the urban self-employed in 1998, when a significant proportion of the target population did not join the system, suggested that a mandatory system was necessary [11]. In terms of financing streams, the government agreed to mirror the existing arrangements for social health insurance, funding the contribution for the poor and (partially) for the self-employed from general taxes, while also requiring co-payments to moderate demand [6].

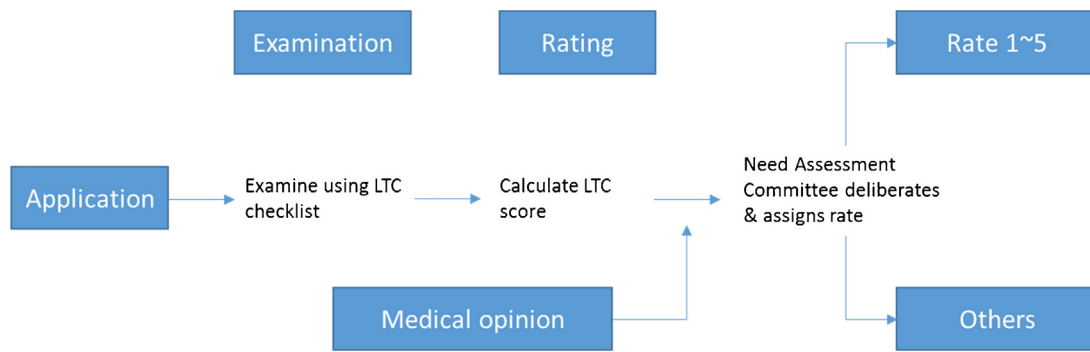
The system has four financing sources. First, contributions are collected from all participants to the National Health Insurance system. For formally employed individuals, a contribution rate is currently 0.38 percent of wages, paid in equal parts by the employer and the employee (0.19 percent each). The contributions for LTCI and social health insurance are collected together by the National Health Insurance Service, but are administered separately [5]. The contributions of the self-employed (including farmers) are decided by composite scores reflecting the individual's

income, property, and other assets. Second, the government supplements the LTCI contributions with additional funding from general taxes, which represents 20 percent of anticipated contribution receipts [4]. Third, state and local governments subsidize the full contribution for those eligible for welfare benefits (called the Basic Livelihood Security Program, BSLP). They subsidize 50 percent of the contribution for the second-poorest group of citizens, who most often live in poverty but do not meet the strict eligibility requirements for the BSLP, including income, assets, and the availability of assistance by relatives [12]. Finally, coinsurance is set at 15 percent of costs for home care services and 20 percent for institutional care services [13]. Even though the poor are exempted from these co-payments [14], high out-of-pocket expenses have raised concerns about unaffordability of services, especially for the near-poor. As a result, the Seoul Metropolitan Government began subsidizing out-of-pocket expenses for LTCI benefits for the near-poor starting in July 2013 [15], and other local and municipal governments are considering similar subsidies.

### 2.2. Eligibility for LTC in South Korea

Under the Korean system, there are two criteria for determining long term care eligibility: being 65 or older or being younger than 65 and suffering from a "geriatric disease" such as Alzheimer's. People fulfilling either one of these criteria must apply to receive benefits. The costs for applying for long term care benefits are covered by the Insurance Service, with a 20 percent out-of-pocket payment for general applicants and 10 percent out-of-pocket payment for beneficiaries qualifying for medical disabilities.

To qualify for benefits, an NHIS staff member (e.g., a social worker or a nurse) makes a home visit and assess the applicant's physical function, psycho-cognitive function, and needs for nursing and rehabilitation treatment. The applicant's ability to perform activities of daily living (ADLs) is also assessed using a standardized form [16]. An assessment committee composed of physicians, case managers, and social security professionals (14 members in total and a chairperson) assesses the person's application. The committee operates at the city, county, or municipal level [16]. The qualification is based on having difficulty with ADLs for a period of at least 6 months (Fig. 3). Five rating levels are assigned to applicants who qualify. The determination is based on a score calculated by aggregating their performance using a checklist involving 52 dimensions of mental and physical status. Level 1 is given for a score of 95–100, for those applicants who require help in all aspects of daily life. Level 2 is given for a score between 75 and 95 and designates those who require help in most areas of daily life. Level 3 is given for a score higher than 60 who are judged to require help in some part of daily life, and Level 4 is given to those with a score above 51, requiring more limited help in activities of daily life. Applicants with a score below 51 are not approved for receiving benefits unless they suffer from dementia, in which case they are assigned to Level 5.



**Fig. 3.** Process for determining benefits eligibility in Korea. *Source:* Korean National Health Insurance Service 2014.

### 2.3. Benefits

There are four main categories of benefits covered under the Korean system: facility benefits, in-home benefits, assistive device benefits, and special cash benefits. Cash benefits are provided rarely – for example, when there is a lack of providers in the beneficiary's area. In 2013 the cash payment amounted to US \$173 per month (calculated using purchasing power parity). Unlike in some other countries (see Germany below), cash benefits are discouraged in Korea because of concerns regarding potential familial abuse and the worry that informal caregivers will provide low-quality care. Home care services are also covered, with benefit limits ranging from US \$1,015 to \$1,318 per month depending on eligibility level. Benefit limits for allowed institutional services range from US \$1,298 to \$1,824. The system covers the purchase or lease of assistive devices that help beneficiaries with their ADLs. These devices include mobile toilets, walkers, and slip-resistant products (of ten total products approved for purchase) as well as manual wheelchairs and electric beds (of six products approved for lease) [13]. These costs do not cover lodging (for institutional care), food, haircuts and hairstyling, upgraded rooms, and other services which are the responsibility of the person or their family.

### 2.4. Service delivery

Initially, there was concern that an insufficient supply of service providers would lead to public concerns that the programs were offering “insurance without services”. In an attempt to stimulate supply growth, the government instituted a provider market with minimum national standards and little quality monitoring [5]. Institutional providers are accredited by the MOHW and can include both for-profit and not-for-profit institutions. Workforce certification is done based on national qualifications, including 240 h of training and practice. However, there is little oversight for continuous quality improvement. This may change when it is perceived that an adequate number of providers are available. Providers are paid via different methods depending on services – per hour for home care, per visit for home nursing and baths, and per day for institutional care and day or evening care.

#### 2.4.1. Comparing the South Korea approach to Japan and Germany

Germany and Japan have older populations and more experience with LTCI and were models for South Korea. All three countries relied on social insurance systems to achieve universal coverage through a single national program. There are, however, important differences in the features and implementation of the LTCI programs among these countries. Middle-income countries will need to assess the relevance of the difference in their own settings.

### 3. Long term care insurance in Germany

The German long-term care insurance system was introduced in 1995 and became fully operational in 1996. Similar to South Korea, the system is financed through employer and employee contributions. Germany offers mandatory coverage for long-term disability and illness as part of the broader national social insurance scheme operated in 2014 by 131 non-profit Sickness Funds. By using already established administrative systems, Germany was able to both create economies of scale in administrative capacities and also ease the implementation burden.

Compared to South Korea, the long-term care insurance contribution rate is currently much higher in Germany – 2.05 percent of gross salary, reflecting a more generous benefit package, a higher percentage of older persons in Germany, and a lower threshold for eligibility. The contribution rate increased steadily from an initial level of 1 percent of gross earnings in January 1995. Employers and employees in the formal sector split the premium cost. Retirees pay half of the premium out of pocket and the pension fund covering the retiree pays the other half, in contrast to Korea, where there is no special program for retirees. In Korea, retirees are automatically covered by LTCI as the dependents of the subscriber or pay their premium in the same way as the other self-employed.

In Germany, an interesting change is the addition in 2005 of an extra 0.25 percentage points to the LTCI premium rate for childless individuals, as they are perceived as being less likely to receive informal care [17]. Health insurance and social LTCI contributions are calculated as a percentage of income up to the so-called social insurance ceiling, which in 2014 was set at €48,600. People whose jobs are not subject to social security, such as self-employed

individuals, civil servants, and those employed with a wage income above the social security threshold, are exempted from social health and LTCI contributions, but are mandated to purchase highly regulated private coverage [17]. People born before 1940, as well as persons under 23 years old, persons in the military and recipients of unemployment insurance are exempt from paying into the system. Pensioners used to receive a contribution subsidy from the pension funds, but since April 2004 have been required to pay their full LTCI contributions out-of-pocket [18].

Unlike the South Korean system, which has age restrictions, German citizens regardless of age are eligible to receive long-term care benefits. The method for determining eligibility for benefits is similar to South Korea, but differs in certain aspects. Physicians and nurses assess care levels under specific guidelines, as mandated by the Medical Review Board. To receive benefits, persons must have limitations in two ADLs that will persist for at least 6 months and a need for help in some instrumental activities of daily living (IADLs). In 2007, 30% of applications for assistance were rejected [19]. The system has three levels of care needs, similar to the five grades in South Korea: (1) need for considerable care, (2) need for intensive care, and (3) need for highly intensive care. Starting in 2008, there is also grade 0 for individuals with dementia. According to the German Federal Ministry of Health, the probability of being in need of care is 0.7% for persons younger than 60, 4.2% for persons between 60 and 80 years, and increases to 28.8% for persons older than 80 years [20].

Germany makes it much easier to receive cash benefits than South Korea. In 2011, of the 2.5 million total beneficiaries receiving long term care benefits, 47.3 percent were cared for by relatives and other informal caregivers, 23.0 percent were provided services by home care agencies, and 29.7 percent were in institutional care [21,22]. People who qualify for benefits can choose to receive a cash allowance, direct services, or a combination of both. Most beneficiaries living at home (70.3 percent) choose cash benefits to be used at the discretion of the beneficiary, even though the value is much lower than that of direct services. Approximately 15 percent of beneficiaries living at home receive both cash and direct services [19].

The German system covers an informal caregiver's social security premiums and vacation pay if she/he provides at least 14h of care per week, as a way to make informal care more attractive. The introduction of public financing for LTC at home has led to significant growth in the infrastructure of care giving providers. Since the inception of the program, the number of home and community-based providers and institutional care facilities has increased dramatically, from about 4000 home care agencies in 1995 to 12,349 in 2011, and from 4300 nursing homes in 1995 to 12,354 in 2011 [21,22]. This expansion has resulted in virtually no waiting times for institutional care. The share of private for-profit nursing homes (40 percent) has increased since 1995. In the home-care market, 63 percent of agencies are for-profit, 36 percent are non-profit and 1 percent are public (Busse and Blumel 2014). Women provide the majority of family assistance, and co-residence with the LTC recipient is very common. Free voluntary courses providing information and training for

relatives have been available since the introduction of the program [23].

#### 4. Long term care insurance in Japan

The LTCI system in Japan was implemented in 2000 in order to provide coverage for long-term care services outside of the hospital setting where most of the formal care was being provided. Japanese policy makers had eliminated cost sharing for medical care for the elderly in 1973. Even though the copayment was reinstated in the early 1980s, hospitals were frequently being used as long term care facilities if a family member (traditionally the wife of the oldest son) was unable to provide the care. Coupled with the expansion of hospital supply, this policy led to an influx of “social admissions” – the number of frail elderly people admitted to the hospital without medical justification increased dramatically over several decades and the hospitalization rate in the elderly doubled, from 2 percent in 1970 to 4 percent in 1990 [24]. Length of stay averaged over 30 days, primarily because of these “social admissions”. This inappropriate use of hospital services was considered a serious problem considering the rapid aging of the population and the decreasing number of family caregivers [25]. Politically, the adoption of the LTCI system is the result of a decade-long process which began with the introduction of the “Ten Year Strategy to Promote Health and Welfare for the Elderly”, informally known as the “Gold Plan”. This firmly placed the issue of care for the frail elderly on the public agenda and provided grants to local governments to significantly increase the supply of long-term care providers according to set targets [25].

Under Japan's scheme, municipalities act as the insurers for LTCI and are responsible for setting budgets as well as premium levels for beneficiaries. However, financing for LTCI is independent of the municipal budget, in that the LTCI system can only be financed through increases in premiums and redirection of appropriated funds from other services is not permitted [24]. Although it operates as a social insurance system, funding for the LTCI program is composed of tax revenues (50 percent) and premiums and copayments from individuals age 40 and above. Tax revenues are derived from both central and local taxes (25 percent national, 12.5 percent prefectures, and 12.5 percent municipalities) [26]. Contributions for those between 40 and 64 years old are set at 0.9 percent of monthly income. These premiums are collected with the social health insurance contributions, pooled nationally, and redistributed according to age and income composition of municipalities [27]. For those individuals 65 and older, premiums are set by municipalities (so they vary geographically depending on local spending) and deducted by the local government from pension schemes. The premium rates are revised every three years to maintain fiscal balance, based on each municipality's cost projections [27].

To receive benefits, individuals must be certified. Citizens age 65 and older apply at the municipal LTCI office to receive benefits. Eligibility is determined by a combination of algorithmic analysis using a 79-item form assessed by a local government employee (usually a public health nurse) and reviewed by a local expert committee which

includes physicians. There are seven categories of benefits and support that differentiate applicants according to their physical and mental condition. The review committee can change the category determined by the algorithm based on information from the assessor and the attending physician. About one fifth of the cases have their categories changed, usually to a more severe level [24]. In 2007, only 3 percent of applicants for assistance were rejected [19]. After eligibility and entitlement level have been determined, recipients consult with any certified care management agency to develop a care plan based on their entitlement level and individual preference [24].

When the program was initially put in place, the Government of Japan estimated that 2.7 million people would be eligible to receive benefits. Of that total number, the Government estimated that approximately 0.7 million would choose institutional care and the remaining 2 million would opt for some form of community care, which includes home care, group homes and other forms of assisted living [24]. Initially, these figures slightly overestimated actual demand, with 2.3 million people certified as eligible in the first year of LTCI operation. However, the subsequent rate of increase was much higher than expected, as people became more aware of their entitlement and supply grew. By 2005, the number of eligible individuals grew to 4.3 million, or 16 percent of the elderly, while the estimated figure had been 12 percent [24] (Fig. 3). In 2005, the system's actual expenditures of ¥6.8 trillion exceeded the projected ¥5.5 trillion [24].

Unlike Germany, Japan does not offer cash benefits and instead benefit choices are between institutional care and home-based or community-based care. Although individuals between ages 40 and 64 pay into the system, they are limited in their access to benefits. Similarly to South Korea, for people age 40–64 the LTCI system only provides benefits in cases of “age-related” disability such as Alzheimer's disease or stroke [28].

Services are divided into two categories: long-term care benefits and prevention benefits (added in 2006 and playing a secondary role). Long-term care benefits include a wide range of in-home and institutional benefits, including housekeeping and personal care, nurse visits, and rehabilitation. The system also covers the costs for leasing and purchasing specifically approved assistive devices that aid beneficiaries' performing of ADLs [27]. All benefits are subject to a 10 percent coinsurance up to an out-of-pocket ceiling set for each eligibility level. The amount is set irrespective of income or assets. After reaching the benefit ceiling, beneficiaries pay 100% of their LTC costs out of pocket until they reach a means-tested stop-loss threshold called the “high-cost long-term care service limit”, above which insurance covers all services [27]. This is a unique element of the Japanese system, which unlike Korea and Germany provides relatively rich coverage through this benefit design element for the very high cost patients. However, in practice very few beneficiaries reach the stop-loss threshold [27]. Unlike Germany, but similarly to Korea, institutional care beneficiaries are responsible for their lodging costs and a portion of meal costs. These costs are means-tested and capped for low-income people.

Institutional care services include those provided by (i) special nursing homes, where most beneficiaries reside for the remainder of their lifetime; (ii) long-term care health facilities, designed for post-discharge rehabilitation and transition to the community; and (iii) chronic care hospitals. Community-based services were introduced in 2006 and include home visits at night, day care for dementia patients, dementia group homes, multi-function at-home care, and care provided in specific institutions such as private nursing homes and long-term welfare institutions. A large number of beneficiaries use day care services [27]. Providers include public, private non-profit, as well as for-profit organizations (except in institutional care, where for-profit providers are excluded), licensed and supervised by prefectural governments [27]. About 40 percent of home-care providers are for-profit [29].

Providers are paid using a nationally set fee schedule adjusted every three years, whereby each service is assigned a number of “units”. This number is constant across care levels for in-home services, but varies by type of provider and beneficiary care level for institutional providers. The units are then multiplied by a conversion factor but can vary based on regional input costs [27].

## 5. Discussion

Based on the description of the three systems for long-term care financing presented above, middle-income countries considering LTCI should focus on benefit design, financing, eligibility and supply issues. Middle-income countries will need to make a number of highly interrelated decisions that may take years to consider.

### 5.1. Benefits design

The most important issue in the design of insurance benefits is their generosity. In this aspect, the three countries' experiences strongly suggest starting with less generous benefit packages and expanding the benefits as more financing becomes available. The reasons for this approach are both economic and political. First, less generous benefits will obviously be easier to finance, causing a smaller initial financial burden. Moreover, there is usually significant uncertainty in predicting the cost burden of the system before implementation, as the Japanese case illustrates. From a political standpoint, this prudent approach will ease policy makers' worries of bankrupting the social insurance and public finances in the long term, while providing a tangible and valued benefit to the population in the short and medium term.

Another important issue regarding benefits is whether to incentivize people to choose institutional services, professional home care, informal home care, or cash benefits. In many countries, elderly people prefer to be cared for at home and will accept a lower actuarial benefit to be able to remain at home. The experience of the three countries suggests that social and cultural norms are key factors in this context, since there are advantages and disadvantages to all approaches. Family members, who are considered more likely to be more knowledgeable and attuned to beneficiaries' needs and preferences, are provided with

**Table 3**

Proportion of elderly population and proportion of eligible population in Germany, Japan, and Korea, 1995–2010.

		1995	2000	2008	2010
Germany	Population aged 65+ (% of total)	15.5	16.4	20.2	20.4
	Eligible persons (% of total)	8.4	13.5	12.9	13.5
Japan	Population aged 65+ (% of total)	12.6	17.4	22.0	23.1
	Eligible persons (% of total)	–	9.9	16.1	16.6
Korea	Population aged 65+ (% of total)	5.9	9.2	10.3	10.9
	Eligible persons (% of total)	–	–	4.2	5.8

Sources: Korean National Health Insurance Service (NHIS); Japanese Ministry of Welfare and Labor; German Federal Ministry of Health.

Note: The highlighted cells indicate the relevant proportions in the years when the countries introduced their long-term care insurance programs.

**Table 4**

Comparison of the Three Systems.

	Korea	Japan	Germany
Financing	50–60% wage contributions; 0.39% for all adults registered under NHI 10–30% central and local taxes; copayments	½ premiums, ½ taxes; 1/3 of premium revenue from 65+, with 6 premium levels based on income; 2/3 from 40 to 64 at 1% of income, up to a ceiling	Wage contributions; 2.05% of income up to a ceiling; 2.3% for childless adults
Regional differences in premium levels	No	For those aged 65+, linked to local spendingFor 40–64, pooled nationally and redistributed; more goes to low-income, older age municipalities	No
Coinsurance	15% for home services20% for institutional services	10%20% for those with annual household income more than \$24,000 (from August 2015)	No coinsurance or deductible
Population coverage	Unconditional for those aged 65+Conditional for adults under age 65 with age-related diseases (disabled are excluded)	Unconditional for those aged 65+Limited to age-related diseases for those aged 40–64	All ages
Percentage of those aged 65+ eligible	4.2% in 20086.1% in 2013	16.5% in 200818.2% in 2013	12.0% in 2011
Percentage of those aged 65+ receiving benefits	3.1% in 20085.2% in 2013	13.3% in 200814.9% in 2013	12.0% in 2011
Eligibility levels	5	5 for regular LTCI2 for preventive benefits	3 (plus a limited additional hardship level in HCBS)
Benefit ceilings per month (\$ PPP)	Home care: \$1,015–\$1,318Institutional services: \$1,298–\$1,824Cash allowance (only in exceptional cases): \$173	Services onlyHCBS: \$1,670–\$3,610HCBS preventive care: \$500–\$1050Institutional services: \$1990–\$3960Room/board costs covered for low-income; 1/3 covered for all other beneficiaries	Cash: \$297–\$886 + caregiver pension premiumsHCBS: \$570–1899 (hardship: \$2260)Institutional services: \$1295–1962Room/board costs not covered; low-income covered under public assistance
Management	National Health Insurance Service, central and local branches (LTC managed separately)	LTC insurance section of municipal government or their coalitions	Sickness Funds (LTC managed separately)
Fee schedule for services	Set nationally by NHIS	Negotiated nationally, adjusted for regional cost differences	Negotiated regionally between sickness funds and providers
GDP/capita when started system (US\$ PPP)	28,718	25,931	22,464
GDP/capita in 2013 (US\$ PPP)	33,140	36,315	43,332
Time to set up system	10 years	5 years	4 years

Sources: Government publications on long-term care insurance, as cited in text.

Notes: Converted to purchasing power parity (PPP) using OECD published conversion rates; GDP = gross domestic product; HCBS = home care benefits and services.



cash benefits in Germany to encourage informal care giving. These payments have been about half of the value of service-only benefits, thus helping the German system contain costs. In Japan, the opposite is the case: cash benefits are not provided at all, due to the concern that informal caregivers (generally young wives) would be burdened. Moreover, Japan's long experience with institutionalizing the elderly in hospitals during the pre-LTCI period made formal care giving more acceptable in the Japanese culture (Tables 3 and 4).

The main concern in Japan was providing insurance without benefits, so payments and benefits were designed to encourage provider entry in the market. This included for-profit providers, which is the first time a Japanese social services sector was opened to for-profit firms. As costs escalated rapidly, in 2005–2006, the Government introduced preventive services for levels 1 and 2 (considered “at risk” groups) as a way to discourage nursing home placement. These services include strength training, nutrition management, and education, and their goal is to help seniors maintain or enhance the ability to perform ADL and prevent them from becoming dependent [26]. These reforms were part of a larger strategy to reduce institutionalization and contain costs; another policy choice was to introduce 50 percent copayments for lodging charges in institutional settings (low-income elders are exempt) [26].

In Korea, cash benefits are provided only in regions where institutional providers are not available. Another concern, raised by women's groups, was that providing cash benefits would increase the burden on family caregivers, particularly women, while hampering their workforce participation. Finally, there was a fear that providing cash benefits would keep the facility infrastructure underdeveloped [5].

## 5.2. Financing

Middle-income countries face difficult choices among different financing sources for long-term care benefits: private insurance, social insurance, or general tax-based systems. Private insurance may be the least desirable option for most middle-income countries because of significant insurance market failures on the supply side found in many high-income countries. Long-term care insurance markets tend to exhibit higher than actuarially fair premiums with very limited benefits, with numerous exclusions and typically cover only about one third of total lifetime expenditure risk [30].

Revenue raised from general taxes provides a more progressive source of funding as well as potentially more flexibility in allocating resources among different government priorities. However, countries with general revenue-financed systems controlled by local governments may find it difficult to enforce national standards for eligibility. Moreover, these systems are much more vulnerable to budget cuts as priorities shift because of both political and economic factors. But ultimately, as we have seen in the cases of Korea, Japan, and Germany, countries familiar with social insurance will likely favor this mechanism for LTCI, while those having experience with tax-funded

systems are more prone to favor this approach for funding long term care as well.

Social insurance as a mechanism for financing long-term care has a number of advantages for middle-income countries. First, the countries are familiar with the system since it is commonly used to finance medical care and the infrastructure is already in place. Second, earmarking the funds for specific benefits increases the political feasibility of introducing such a scheme. Third, separating the funds from the larger government budget means that LTC financing does not compete directly with other priorities such as the military, education, infrastructure investment, etc.

But even when employing social insurance as the basic approach, the three countries use a variety of approaches to supplement social insurance contributions. First, social contributions are covered for the unemployed, students, and those with low incomes through tax revenues as a way to increase the equity in the system. These revenues can be financed either through local taxes or general revenues depending on countries' local government administrative and fiscal capacity. Second, out-of-pocket payments are often utilized as an essential tool to curb moral hazard and prevent overutilization of services, as seen in the cases of Korea and Japan. These payments are commonly waived for low-income beneficiaries and the foregone revenue is recovered from taxes. Germany, in contrast, does not have any cost sharing. There may be a need for a catastrophic cap on out of pocket spending and Japan's approach of instituting a stop-loss threshold is one approach.

## 5.3. Eligibility and coverage assessment

Coverage policy has critical implications for the functioning and costs of the system. A key question is whether coverage is restricted to older people only or extended to include younger disabled persons as well. In Korea, only the aged are covered. In contrast, in Germany all individuals are eligible to receive benefits; this is a key tenet of the German principle of social solidarity – everyone pays and everyone is eligible for benefits in case of need. Japan adopted both approaches – covering only people age 40–64 years who have specific diseases. These examples highlight the spectrum of choice available for middle-income countries.

Another choice pertains to the process of determining coverage. As mentioned, the German system administers an objective assessment tool, while Korea and Japan uses both an assessment tool as well as medical review by an expert committee to determine who receives benefits. The German system has the advantage that it is more objective, but that depends on the public's perception of the legitimacy of a “bureaucratic” algorithm. In Japan and Korea, where the medical profession lobbied politically to gain a role in the assessment process, doctors gained a critical role in the system.

## 5.4. Provider supply and quality

A concern is that the introduction of LTCI may not guarantee appropriate care if the country faces a shortage of providers, as is often the case in many middle-income countries. LTCI can serve as a stimulus for the development

of service providers, since the predictability of funding creates more stable market conditions. Governments, worried about insufficient providers, should consider allowing a “preparation” phase before the passage of LTCI legislation, in which formal caregivers can be trained and a functioning provider market can be created. At the beginning, one possibility is to finance coverage at more stringent levels through tax revenues, typically through existing welfare systems. Japan’s Gold Plan and New Gold Plan, for example, provided grants to local governments, but kept the means-tested benefits under the control of local welfare departments [24]. The targets of these programs were successfully met, and they provided time for the number of providers to increase. In contrast, Korea did little to develop its public LTC infrastructure before the introduction of LTCI [8] and as a result, there were initial problems with implementation.

Even when overall supply levels are satisfactory, there may be substantial variation in the availability of providers across different areas – including a complete lack of providers in some geographic areas. Korea’s solution to this issue has been to provide cash benefits for informal caregivers in locations in which there is a lack of formal providers in a certain region. Finally, Germany’s goal was to strengthen the incentives for home care by providing cash benefits and free LTC training courses, as well as paying statutory pension insurance for informal caregivers who provide more than 14 h of nursing per week [31].

A related question is how governments can ensure appropriate levels of service quality. This is especially important in the early years when there is a need to expand capacity and becomes a problem later when some low quality institutions are in place. Attempting to stimulate providers’ market entry in the initial years creates the danger of accrediting low-quality providers, thus creating a trade-off between service availability and quality. One mechanism for promoting quality beyond initial accreditation is to allow free provider choice (and switching providers) by beneficiaries. However, real choice requires a sufficient number of providers in the market, as well as substantial and accessible information on quality and prices. These elements may not be present in a developing market, which is why strong government oversight may be warranted, particularly through continuous monitoring and quality assurance. This requires more significant investments in government capacity and the development of sound quality standards and assessment procedures. The standards can be strengthened even more once policy makers judge that there are sufficient providers.

### 5.5. Economic development and LTCI

Middle-income countries may be worried about whether LTCI will hamper economic growth. In fact, there may be two major ways in which LTCI can positively affect growth. First, a benefit design encouraging formal care as opposed to informal care can contribute to increasing labor participation. It provides jobs and it allows women to work instead of caring for their parents or parents in law. Second, a well-designed LTCI system may promote a more efficient allocation of resources for taking care of the aged

population. In the absence of such a system, the LTC provider market may suffer from adverse selection resulting in high prices and inability to get care [30]. Moreover, the lack of sufficient providers and financing may strain the cohesion of young families, affecting their economic productivity.

## 6. Conclusion

In summary, the experiences of South Korea, Germany, and Japan provide valuable lessons for middle-income countries considering insurance for long-term care. Long-term care benefits can lead to high public satisfaction if properly designed, and a highly functional system can be implemented with a variety of benefit designs that fit policy-makers’ goals and the fiscal and economic situation of the country. In particular, a high level of public satisfaction is possible even with relatively modest benefits. One major choice is whether to allow cash benefits. The most important elements affecting the cost of the system are benefits design and eligibility criteria. Another key issue is service quality, which can be encouraged through various mechanisms of market competition and regulation. Finally, LTCI systems can boost economic growth by freeing up informal caregivers for labor market participation and promoting social cohesion. Middle-income countries must begin these preparations long before the program is implemented.

## Conflicts of interest

None.

## References

- [1] Wagstaff A. Social health insurance reexamined. *Health Economics* 2010;19(5):503–17.
- [2] Korean Statistical Information Service. Population/household statistical database. ([http://kosis.kr/eng/statisticsList/statisticsList\\_01List.jsp?vwcd=MT\\_ETITLE&parentId=A](http://kosis.kr/eng/statisticsList/statisticsList_01List.jsp?vwcd=MT_ETITLE&parentId=A)); 2014 [accessed 06.12.14].
- [3] The World Bank. Population estimates and projections. Health, Nutrition and Population Statistics 2013.
- [4] Chon Y. Long-term care reform in Korea: lessons from the introduction of Asia’s second long-term care insurance system. *Asia Pacific Journal of Social Work and Development* 2012;22(4):219–27.
- [5] Seok JE. Public long-term care insurance for the elderly in Korea: design, characteristics, and tasks. *Social Work in Public Health* 2010;25(2):185–209.
- [6] Kwon S. Future of long-term care financing for the elderly in Korea. *Journal of Aging & Social Policy* 2008;20(1):119–36.
- [7] Korea Development Institute. KDI annual report 2010.
- [8] Chon Y. The development of Korea’s new long-term care service infrastructure and its results: focusing on the market-friendly policy used for expansion of the numbers of service providers and personal care workers. *Journal of Gerontological Social Work* 2013;56(3):255–75.
- [9] Korea Institute for Health and Social Affairs. Health and social welfare review 2012.
- [10] National Health Insurance Service. National health insurance service annual report 2013.
- [11] Kwon S, Holliday I. The Korean welfare state: a paradox of expansion in an era of globalisation and economic crisis. *International Journal of Social Welfare* 2007;16(3):242–8.
- [12] OECD. Organization for Economic Cooperation and Development. Korea: OECD Economic Surveys; 2012. p. 1–30.
- [13] Korea National Health Insurance Service. Long-term care insurance—insurance benefit. (<http://www.nhic.or.kr/static/html/wbd/g/a/wbdga0503.html>); 2014 [accessed 20.02.14].

- [14] Kwon S. The introduction of long-term care insurance in South Korea. *Eurohealth* 2009;15(1):28.
- [15] Lee HS, Wolf DA. An evaluation of recent old-age policy innovations in South Korea. *Research on Aging* 2014, 0164027513519112.
- [16] Kim S-H, Kim DH, Kim WS. Long-term care needs of the elderly in Korea and elderly long-term care insurance. *Social Work in Public Health* 2010;25(2):176–84.
- [17] Heinicke K, Thomsen SL. The Social Long-term Care Insurance in Germany: Origin, Situation, Threats, and Perspectives. Mannheim, Germany: Center for European Economic Research; 2010 [Discussion Paper No. 10-012].
- [18] Arntz M, Sacchetto R, Spermann A, Steffes S, Widmaier S [Discussion Paper] The German social long-term care insurance: structure and reform options. Bonn, Germany: Institute for the Study of Labor (IZA); 2007. p. 1–25.
- [19] Campbell JC, Ikegami N, Gibson MJ. Lessons from public long-term care insurance in Germany and Japan. *Health Affairs* 2010;29(1):87–95.
- [20] German Federal Ministry of Health. Selected facts and figures about long-term care insurance. ([http://www.bmg.bund.de/fileadmin/dateien/Englische\\_Dateien/Selected\\_Fact\\_and\\_Figures.pdf](http://www.bmg.bund.de/fileadmin/dateien/Englische_Dateien/Selected_Fact_and_Figures.pdf)); 2014 [accessed 06.12.14].
- [21] German Federal Statistical Office. (<https://www.destatis.de/EN/FactsFigures/SocietyState/Health/LongTermCare/Tables/NursingCareFacilities.html>); 2015 [accessed 01.03.15].
- [22] German Federal Statistical Office. People in need of long-term care, (<https://www.destatis.de/EN/FactsFigures/SocietyState/Health/LongTermCare/Tables/PeopleLongTermCare.html>); 2015 [accessed 01.03.15].
- [23] Gibson MJ, Redfoot DL. Comparing long-term care in Germany and the United States: what can we learn from each other? Washington, DC: A. P. P. Insitute; 2007.
- [24] Ikegami N. Rationale, design and sustainability of long-term care insurance in Japan—in retrospect. *Social Policy and Society* 2007;6(03):423–34.
- [25] Campbell JC, Ikegami N. Long-term care insurance comes to Japan. *Health Affairs* 2000;19(3):26–39.
- [26] Tsutsui T, Muramatsu N. Japan's universal long-term care system reform of 2005: containing costs and realizing a vision. *Journal of the American Geriatrics Society* 2007;55(9):1458–63.
- [27] Shimizutani S. The future of long-term care in Japan. RIETI Discussion Paper Series 13-E-064, 2013.
- [28] Matsuda S. Long-term care insurance and integrated care for the aged in Japan. *International Journal of Integrated Care* 2001; 1(e28).
- [29] Noguchi H, Shimizutani S. Nonprofit/for-profit status and earning differentials in the Japanese at-home elderly care industry: evidence from micro-level data on home helpers and staff nurses. *Journal of the Japanese and International Economies* 2007;21(1): 106–20.
- [30] Brown JR, Finkelstein A. Why is the market for long-term care insurance so small? *Journal of Public Economics* 2007;91(10): 1967–91.
- [31] Geraedts M, Heller GV, Harrington CA. Germany's long-term-care insurance: putting a social insurance model into practice. *Milbank Quarterly* 2000;78(3):375–401.